

IN THE CLAIMS

Please amend claims 1 and 13 as set forth below, and add new claims 16 and 17.

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Claim 1 (Twice Amended):

A primer-specific and mispair extension assay for determining genotype, said assay comprising:

- a) extending a nucleic acid sequence from a patient sample with *pfu* DNA polymerase, using a primer specific for a genotype to be determined, and an incomplete set of dNTPs in the absence of ddNTPs, under suitable conditions for obtaining extension products of the primer such that one or more mispair at a given position relative to 3' end of the primer is created in the extension products that terminates the extension, and wherein at least one of the primer or the dNTPs is labeled;
- b) characterizing the extension products; and
- c) analyzing the characterized extension products based on primer specific pairing and non-specific pairing to determine the genotype of the nucleic acid sequence extended.

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Claim 13 (Amended):

A primer-specific and mispair extension assay for determining genotype, said assay comprising:

- a) extending a nucleic acid sequence from a patient sample with *pfu* DNA polymerase, using a primer specific for a genotype to be determined, and an incomplete set of dNTPs in the absence of ddNTPs, under suitable conditions for obtaining specific pair and non-specific pair extension products of the primer, such that one or more mispair at a given position relative to 3' end of the primer is created in the extension products that terminates the extension, and wherein at least one of the primer or the dNTPs is labeled;
- b) separating the extension products obtained;

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- c) characterizing the extension products;
- d) generating a genotype-specific extension profile of the extension products; and
- e) analysing the genotype-specific extension profiles to determine a genotype of the nucleic acid sequence.

Please add the following new claims:

Claim 16 (New):

The primer-specific and mispair extension assay of claim 1 wherein said given position of said one or more mispair is immediately adjacent to said 3' end of the primer.

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Claim 17 (New):

The primer-specific and mispair extension assay of claim 1 wherein more than one mispair are created immediately following one correct pairing at the position immediately adjacent to said 3' end of the primer.